

CLAIMS

What is claimed is:

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5 1. A method comprising:  
determining if travel on a learned route by a user  
is likely;  
accessing traffic information pertaining to the  
learned route when travel on the learned route is likely;  
and  
10 delivering the traffic information via a mobile  
terminal to the user.

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15 2. The method of claim 1 wherein at least one  
travel time is associated with the learned route and said  
step of determining if travel on a learned route by a  
user is likely comprises determining if a current time  
corresponds to the at least one travel time associated  
with the learned route.

20 3. The method of claim 2 wherein at least one  
destination is associated with the learned route and  
further comprising predicting one of the at least one  
destinations as a most likely destination based on the  
current time and the at least one travel time associated  
25 with the learned route, wherein the most likely  
destination bears on the traffic information delivered to  
the user of the mobile terminal.

30 4. The method of claim 1 wherein said step of  
determining if travel on the learned route by the user is  
likely comprises:

determining a location of the mobile terminal; and  
comparing the location of the mobile terminal with  
location information associated with the learned route to

determine if travel on the learned route by the user is likely.

5. The method of claim 4 further comprising  
5 determining a direction of travel along the learned route based on determining successive locations of the mobile terminal for at least one interval of time, wherein the direction of travel bears on the traffic information delivered to the user of the mobile terminal.

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6. The method of claim 4 wherein at least one travel time is associated with the learned route and said step of determining if travel on a learned route by the user is likely comprises determining if a current time  
15 corresponds to the at least one travel time associated with the learned route and the location of the mobile terminal corresponds with the location information associated with the learned route.

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7. The method of claim 1 wherein at least one destination is associated with the learned route and further comprising predicting a most likely destination as one of the at least one destinations associated with the learned route based on determining a direction of  
25 travel along the learned route, wherein the most likely destination bears on the traffic information provided to the user of the mobile terminal.

8. The method of claim 7 wherein said determining  
30 a direction of travel along the learned route comprises determining successive locations of the mobile terminal.

9. The method of claim 1 further comprising learning the learned route by:

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recording locations of the mobile terminal traveling along a traveled route; and  
processing the locations to define the learned route.

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10. The method of claim 9 further comprising:  
receiving a first user command and performing said step of recording locations in response to the first user command; and

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receiving a second user command and performing said step of processing the locations to define the learned route in response to the second user command.

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11. The method of claim 9 wherein said processing the locations to defined the learned route comprises correlating the locations with roadway information to identify at least one road segment associated with the locations, and wherein said step of accessing traffic information pertaining to the learned route is based on accessing traffic information pertinent to the at least one road segment.

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12. The method of claim 1 wherein learning the learned route comprises:

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periodically recording data including at least a location of the mobile terminal over a period of time;  
processing the data to identify at least one group of associated ones of the locations;

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defining at least one learned route as represented by the at least one group of associated locations.

13. The method of claim 12 further wherein said processing the data comprises processing the data such that locations having a most frequent rate of occurrence

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in the data are identified, and wherein the locations having the most frequent rate of occurrence are associated based on a location value to form the at least one group of associated locations.

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14. The method of claim 13 wherein said processing to identify the locations having a most frequent rate of occurrence in the data comprises using a weighted averaging algorithm.

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15. The method of claim 12 further comprising:  
recording time information in conjunction with the locations as part of the data;

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processing the time information in conjunction with the locations to identify at least one travel time associated with the at least one learned route;

processing the locations to determine a most likely direction of travel for the at least one travel time;

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wherein a current time and the most likely direction of travel bears on said step of accessing the traffic information pertinent to the learned route.

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16. The method of claim 12 further comprising:  
correlating the at least one group of associated locations with roadway information to identify at least one road segment associated with the at least one learned route; and

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wherein said step of accessing traffic information pertaining to the learned route is based on accessing traffic information pertinent to the at least one road segment.

17. The method of claim 1 further comprising processing the traffic information pertinent to the

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learned route to determine if an undesirable condition is indicated.

18. The method of claim 17 further comprising:

5     accessing traffic information pertaining to an alternate route; and

      delivering the traffic information pertaining to the alternate route to the user of the mobile terminal if the undesirable condition is indicated.

10     19. The method of claim 17 further comprising receiving one or more user settings used to process the traffic information pertaining to the learned route.

15     20. A computer readable media comprising software for instructing a computer to:

      determine if travel on a learned route by a user is likely; and

      provide traffic information pertaining to the  
20     learned route if travel on a learned route by the user is likely.

25     21. The computer readable media of claim 20 wherein said computer is instructed to determine if travel on a learned route by a user is likely by comparing a current time with travel time information that is associated with the learned route, and wherein the travel time information includes at least one travel time that the user previously traveled the learned route.

30     22. The computer readable media of claim 20 wherein said computer is instructed to determine if travel on a learned route by a user is likely by comparing a current

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location of a mobile terminal associated with the user with at least one location comprising the learned route.

23. The computer readable media of claim 20 wherein  
5 said computer is instructed to determine if travel on a learned route by a user is likely based on comparing a current time and a current location of a mobile terminal associated with the user to learned route information representing the learned route, and wherein the learned  
10 route information includes at least one travel time that the user previously traveled the learned route and at least one location associated with the learned route.

24. The computer readable media of claim 20 for  
15 further instructing the computer to receive location information representing a current location of a mobile terminal associated with the user and to use the location information in determining if travel on the learned route by the user is likely.

25. The computer readable media of claim 20 wherein  
the computer is instructed to provide traffic information pertaining to the learned route if travel on a learned route by the user is likely based on retrieving traffic  
25 information pertaining to the learned route from an associated traffic information database and transferring the traffic information to an external system accessible to the user.

30 26. A computer readable media comprising software for instructing a computer to:

receive a traffic information query from an outside system including geographic location information;

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translating the geographic information into roadway information;

querying a traffic information database for traffic information pertaining to the roadway information; and

5 providing the traffic information pertaining to the roadway information to the outside system.

27. A computer readable media comprising software for instructing a computer to:

10 receive at least one location value representing a location of a mobile terminal; and

process the at least one location value to identify at least one group of associated locations representing at least one route of travel traveled by the mobile  
15 terminal.

28. The computer readable media of claim 27 for further instructing the computer to correlate the at least one group of associated locations with roadway  
20 information to form a learned route including at least one road segment.

29. The computer readable media of claim 28 for further instructing the computer to query an associated  
25 traffic information database for traffic information pertaining to the learned route.

30. The computer readable of claim 20 for further instructing the computer to determining if the traffic  
30 information pertaining to the learned route indicates an undesirable condition and if so to provide traffic information pertaining to an alternate route.

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31. The computer readable media of claim 30 for further instructing the computer to determine the alternate route based on a determining a most likely current destination for the user, wherein information  
5 representing the learned route includes information representing at least one destination associated with the learned route.

32. A computer readable media comprising software  
10 for instructing a mobile terminal to:

determine if travel on a learned route is likely by a user associated with the mobile terminal;

request traffic information pertaining to the learned route from an outside system if travel on the  
15 learned route by the user is likely;

receive the traffic information from the outside system; and

provide the traffic information to the user.

33. The computer readable media of claim 32 wherein the mobile terminal is instructed to determine if travel on a learned route is likely based on comparing a current time with at least one travel time associated with the learned route, and wherein the at least one travel time  
20 represents a time that the user previously traveled the learned route.

34. The computer readable media of claim 32 wherein the mobile terminal is instructed to determine if travel  
30 on a learned route is likely based on comparing a current location of the mobile terminal with at least one location associated with the learned route.

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35. The computer readable media of claim 32 for further instructing the mobile terminal to request traffic information pertaining to an alternate route if the traffic information pertaining to the learned route received from the outside system indicates an undesirable condition.

36. The computer readable media of claim 35 for further instructing the mobile terminal to prompt the user to input customizable settings used to define at least one undesirable condition.

37. A computer readable media comprising software for instructing a mobile terminal to:

periodically record data including at least a location of the mobile terminal; and

process the data to identify at least one group of associated locations representing a route a travel; defining at least one learned route of travel based on the at least one group of associated locations.

38. The computer readable media of claim 37 for further instructing the mobile terminal to record time information in conjunction as part of the data periodically recorded and to further process the data to identify at least one travel time for each of the at least one learned routes, wherein the mobile terminal may compare a current time with the at least one travel times to predict whether or not a user is likely to travel on the learned route.

39. The computer readable media of claim 37 for further instructing the mobile terminal to process the data to identify at least one associated destination for

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each of the at least one learned routes, and for further  
instructing the mobile terminal to determine a direction  
of travel for the user when the user is traveling along a  
given one of the at least one learned routes, and for  
5 further instructing the mobile terminal to predict a most  
likely destination for the given learned route based on  
the direction of travel.

40. The computer readable media of claim 37 for  
10 further instructing the mobile terminal to:  
begin periodically recording locations of the mobile  
terminal in response to a first user command;  
stop recording the data in response to a second user  
command; and  
15 process the data recorded between the first and  
second user commands to defined a learned route.

41. A mobile terminal comprising:  
a wireless communications interface adapted to  
20 communicate with a remote communications network;  
a user interface adapted to provide information to a  
user of said mobile terminal and to receive control  
inputs from the user;  
system control logic adapted to control said  
25 wireless communications interface and said user  
interface; and  
traffic information logic adapted to form traffic  
information queries for transmission to the remote  
communications network, and process the traffic  
30 information received from the wireless communications  
network in response to the traffic information queries  
for subsequent delivery to the user via said user  
interface.

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42. The mobile terminal of claim 41 wherein said traffic information logic is further adapted to record locations of the mobile terminal over at least one period of time, wherein the recorded locations facilitate learning one or more routes traveled by the user of said mobile terminal, and wherein the learning of one or more routes traveled by the user bears on the information included by the traffic information logic in forming at least some of the traffic information queries.

43. The mobile terminal of claim 42 wherein said traffic information logic is further adapted to process the locations recorded to identify at least one group of associated locations representing at least one traveled route, and further adapted to define the at least one traveled route as at least one learned route.

44. The mobile terminal of claim 42 wherein the traffic information logic translates the at least one learned route into at least one road segment based on correlating the locations in the corresponding at least one group of associated locations with roadway information.

45. The mobile terminal of claim 44 wherein said mobile terminal is adapted to receive the roadway information from a separate navigational system, wherein said navigational system is included with said mobile terminal in a vehicular environment associated with the user of the mobile terminal.

46. The mobile terminal of claim 42 wherein said mobile terminal is further adapted to receive the locations from a separate navigational system, wherein

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said navigational system is included with said mobile terminal in a vehicular environment associated with the user of the mobile terminal.

5           47. The mobile terminal of claim 42 wherein said mobile terminal is further adapted to receive the locations from an integral navigational system included in said mobile terminal.

10           48. The mobile terminal of claim 42 wherein said traffic information logic comprises a portion of said system control logic.

15           49. The mobile terminal of claim 42 further comprising a module interface and wherein said traffic information logic comprises a module adapted to interface with said module interface.

20           50. The mobile terminal of claim 49 wherein said module is removably interfaces with said module interface such that said traffic information logic may be removably attached to said mobile terminal.

25           51. A traffic information system comprising:  
a route learning system adapted to learn at least one route each of one or more vehicles having an associated mobile terminal based on recording locations of the mobile terminals over at least one period of time;  
and

30           a traffic information server adapted to provide traffic information for given ones of the mobile terminals in response to receiving traffic information queries from the given ones of the mobile terminals;

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wherein the traffic information system uses a selected one of the at least one route learned for a given mobile terminal to configure the traffic information provided to the given mobile terminal.

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